REMARKS

Claims 1-56 are pending in the present application. In a December 12, 2006, Office Action (herein "Office Action"), Claims 1-56 were rejected. More specifically, Claims 1, 2, 4-22, 24-39, and 41-56 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,023,469, to Olson et al. (hereinafter "Olson"). Additionally, Claims 3, 23, and 40 were rejected under 35 U.S.C. § 103(a) as being obvious over Olson.

For the following reasons, applicants respectfully submit that the prior art fails to teach or suggest elements claimed in the pending claims. Prior to discussing more detailed reasons why applicants believe that all of the claims of the present application are allowable over the cited reference, a brief description of the present invention and the cited references is presented.

Summary of the Present Invention

The present invention is related to a system and method for processing digital images for display on a graphical user interface. A processing server obtains a first frame of image data corresponding to an output from a digital capture device. The processing server may display the first frame of data within a display area on the graphical user interface. In response, the processing server may obtain a designation of at least one processing zone from the user interface device. Each processing zone corresponds to a specific geometric shape and includes processing rule data. The processing server displays the processing zone of the graphical user interface. The processing server then obtains a second frame of image data corresponding to the output from the digital capture device. The processing server determines whether variations occurred between the first and second frames within the processing zone by evaluating differential data corresponding to an adjustable parameter. If the server determines that variations occurred, the image data represented in the processing zone may be stored to mass storage. In this regard, image data that is not in the processing zone may be excluded from being

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stored to mass storage. As a result, aspects of the present invention facilitate a system in which image data in a stream of video images will only be stored if motion is detected. Moreover, when motion is detected within a stream of video images, only image data within a subdivided area of the image data may be stored to mass storage.

Olson et al. (U.S. patent No. 7,023,469)

Olson is purportedly directed to a system for automatically capturing image data using a camera and image processing device. The image processing device is configured to save a reference image from the camera and compare subsequent images to the reference image. In this regard, the image processing device detects and tracks "change regions" between the reference image and subsequent images. A "change region" is an area between successive images in which pixel variations exist. For each change region, the image processing section saves the path of movement of the change region, and a selected image of the change region. Selection of the change image is carried out so as to optimize the selected image. In this regard, processing may be performed to capture images of a detected person so that images are only captured if the detected person is facing and close to the video camera.

The Claims Distinguished

Claims 1, 21, and 38

For purposes of this discussion, independent Claims 1, 21 and 38 will be discussed together because the limitations discussed herein are similar for each claim.

As amended, Claim 1 recites the following:

> 1. A method for processing image data, the method comprising:
> obtaining at least one processing zone for processing digital data obtained from a digital capture device, wherein the at least one processing zone corresponds to a specific geometry that is a subdivided area represented in each frame in a stream of video frames;
> obtaining a first frame of image data corresponding to the digital capture device that includes the at least one processing zone as a subdivided area;

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obtaining a second frame of image data corresponding to the digital capture device that includes the same at least one processing zone;

determining whether there is significant change between the first and second frames within the at least one processing zone, wherein the determination of significant change is made by evaluating differential data corresponding to an adjustable parameter in the image data that is represented within the geometry of the at least one processing zone; and

processing an event if a significant change is determined between the first and second frames within the at least one processing zone, wherein processing the event includes storing the image data in the at least one processing zone to mass storage and excluding image data that is not in the at least one processing zone from being stored.

Similarly, as amended Claim 21 recites the following:

21. A system for providing security monitoring, the system comprising:

one or more monitoring locations including a monitoring device operable to generate a video image;

a central processing server operable to obtain the digital image and generate a user interface;

at least one monitoring computing device operable to display the user interface and to obtain one or more processing zones corresponding to the image data, wherein the central processing server processes the data to determine whether significant change exists the at least one processing zone between successive frames of image data, and if a significant change is identified, the processing server stores the image data in the at least one processing zone to mass storage and excludes image that is not in the at least one processing zone.

Similarly, as amended Claim 38 recites the following:

38. In a computer system having a graphic user interface including a display and a user interface device, a method for processing image data, the method comprising:

obtaining a first frame of image data corresponding to an output from a digital capture device;

displaying the first frame of data within a display area in the graphical user interface;

obtaining a designation of at least one processing zone from the user interface device, wherein the processing zone corresponds to a specific geometric

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shape within the display area that represents a subdivided area in a stream of video frames and includes processing rule data;

displaying the processing zone within the display area of the graphical user interface;

obtaining a second frame of image data corresponding to the output from the digital capture device that includes a specific geometric shape within the display area representing a subdivided area in a stream of video frames;

determining whether there is significant change between the first and second frames within the at least one processing zone, wherein the determination of significant change is made by evaluating differential data corresponding to an adjustable parameter; and

processing an event if a significant change is determined between the first and second frames within the at least one processing zone, wherein processing the event includes storing the image data in the at least one processing zone to mass storage and excluding image data that is not in the at least one processing zone from being stored.

Each of the independent Claims 1, 21, and 38 recites determining whether a change exists in a processing zone or subdivided area that is included in a plurality of frames of video data and processing an event if a change has been identified. In this regard, processing the event includes storing the image data that appears in at least one processing zone to mass storage and excluding image data that is not in the at least one processing zone from being stored. Simply stated, Olson does not teach the designation of at least one processing zone that is a subdivided area of a stream of video frames. Moreover, Olson does not teach a system for storing image data that appears in a processing zone to mass storage and excluding image data that is not in a processing zone from being stored.

The Office Action asserts that Olson teaches obtaining a designation of at least one processing zone and cites Olson at FIGURE 9 items 132 and 133 in support of that proposition. The relevant portion of Olson states the following:

> The user can then use a mouse to identify one or more regions in this image, for example the region 132. The user may define the region by using the mouse pointer to identify the corners of the region, while clicking on each corner. Each time the user defines a region, it is

> automatically given a label, which is a letter. For example, the region 132 in FIG. 9 has been given the label "A." As discussed above, the image processing section 27 maintains a history of the movement of the midpoint of the lower side of the bounding box for each object. If this midpoint were to remain within a given region, such as the region 132, for a predetermined period of time, it might represent loitering, and could be detected by the image processing section 27.

Olson at Col. 10, line 57-Col. 11, line 3. Olson is directed to performing processing on "change regions" which are areas between successive images in which pixel variations exist. The "change regions" of Olson may be user-defined or defined automatically. In contrast to the elements of the independent claims in the present application, the change regions of Olson are used to identify areas of an image where an analysis will be performed. For example, a user may define a "change region" by creating a box by using a mouse or similar input device. Then, by tracking the history of the movement of the midpoint for an object, such as a person, the Olson system is able to make a determination regarding whether a person that enters the user-defined box is "loitering." Other examples given in Olson as to the benefits of "change regions" where pixel variations between successive images have been identified include being able to determine whether a person is facing the camera, identifying the direction that a person is traveling, and the like. However, the independent claims 1, 21, and 38 each recite processing zones that are a subdivided area of an image. In contrast to Olson, the processing zones of the present application are not areas where pixel variations have necessarily been identified. Instead, the processing zones are merely a "subdivided area" of an image that is not necessarily processed by aspects of the present invention. Instead, aspects of the present invention may discard image data if an event is not identified in a particular processing zone.

In addition to the reasoning stated above, independent Claims 1, 21, and 38 of the present application are allowable for additional reasons. In this regard, Claims 1, 21, and 38 recite a

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combination of determining whether there is: 1) a significant change between the successive frames in a video stream within the at least one processing zone that is a subdivided area of the video frames; (2) wherein the determination of significant change is made by evaluating differential data; and (3) storing the image data in the at least one processing zone to mass storage and excluding image data that is not in the at least one processing zone from being stored. In other words, aspects of the present invention subdivide areas within a video frame. Then, determinations are separately made regarding whether motion has been detected in each of the processing zones that are subdivided areas of the video frame. If motion has been detected in one of the processing zones, the image data in the processing zone where a significant change has been identified is stored to mass storage. Image data that is in other processing zones in the video frame is discarded. As a result, aspects of the present invention greatly reduce the amount of image data that is saved to mass storage. However, all of the image data in a processing zone is saved to mass storage. As a result, data that is saved includes a context from which security decisions may be made. In contrast, the Olson system may only capture a particular object in a "selected" image in which a person is most likely to be identified.

Under section 102(e), a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (February 2003). Applicants respectfully submit that Olson fails to expressly or inherently teach, disclose, or suggest each and every element of Claims 1, 21, and 38. As explained above, Olson fails to disclose or suggest storing the image data in the at least one processing zone to mass storage and excluding image data that is not in the at least one processing zone from being stored. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 1, 21, and 38.

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Claims 2-20, 22-37, and 39-56

Dependent Claims 2, 4-20, 22, 24-37, 39, 41-56 were rejected under 35 U.S.C. § 102(e) as anticipated by Olson. Additionally, Claims 3, 23, and 40, were rejected under 35 U.S.C. § 103(a) as obvious over Olson. Since a dependent claim carries each and every limitation of the claim it depends on, the references, either alone or in combination, fail to teach or suggest each of the limitations as discussed above. Accordingly, for this reason, applicants respectfully request withdrawal of the rejection of these claims.

CONCLUSION

In view of the foregoing claim amendments and remarks, applicants submit that all of the pending claims are in condition for allowance. Reconsideration and favorable action are requested. If the Examiner has any questions or comments concerning this matter, the Examiner is invited to contact applicants' undersigned attorney at the number provided below.

Respectfully submitted,

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